

REMARKS

Claims 1-93 are pending in the present application. Claims 33-38 and 70-75 have been allowed. Claims 16-22 and 63-69 are merely objected to. Claims 1-15, 23-32, 39-62 and 76-93 stand rejected.

Allowed Claims

Applicants gratefully acknowledge the indication by the Examiner that claims 33-38 and 70-75 are allowed.

Objected To Claims

Applicants also gratefully acknowledge the indication by the Examiner that claims 16-22 and 63-69 recite patentable subject matter and have merely been objected to. It is believed that the remarks herein place claims 16-22 and 63-69 in condition for allowance.

Obviousness Rejection

Claims 1-15, 23-32, 39-62 and 76-93 stand rejected under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 6,223,061 B1 (“Dacus”) in view of United States Patent No. 6,21,534 B1 (“Cook”). Applicants respectfully traverse the rejection as set forth below.

Dacus and Cook Teach Away From Each Other

“It is improper to combine references where the references teach away from their combination.” M.P.E.P. § 2145(X)(D)(2) at page 2100-161 (Rev. 5, Aug. 2006).

Applicants will show that the teachings of Dacus specifically and particularly teach away from the teachings of Cook. Accordingly, Applicants will have shown that Dacus and Cook were improperly combined and that the obviousness rejection based on the improper combination of Dacus and Cook cannot be maintained.

The Examiner relies heavily on FIGS. 9 and 10 of Dacus in making his *prima facie* case of obviousness in the Office Action mailed September 10, 2007 (“Office Action”). The attention

of the Examiner is respectfully directed to the configuration of the receiving means in FIGS. 9 and 10 of Dacus. It is clear that Dacus teaches using a wideband filter 306, an LNA 308, a mixer 310, a channel select filters 314, 318 and an IF amplifier 320.

The configuration of receiving means in FIGS. 9 and 10 of Dacus is specifically and particularly disparaged by the teachings of Cook. In other words, Cook specifically and particularly teaches away from the configuration of the receiving means in FIGS. 9 and 10 of Dacus.

The attention of the Examiner is respectfully directed to the teachings of Cook. According to the teachings of Cook, the problem with the configuration of the receiving means in FIGS. 9 and 10 of Dacus is that the wideband filter 306 in FIGS. 9 and 10 of Dacus allows too much energy to reach the LNA 308 and the mixer 310, thereby causing the dynamic ranges of the LNA 308 and the mixer 310 to be exceeded. See, e.g., Cook at col. 2, lines 14-19. When the dynamic ranges of the LNA 308 and the mixer 310 are exceeded, “the LNA [] and/or the mixer [] generate spurious signal components []. ... Some of these spurious components [] may coincide and interfere with signals at desired frequencies”. See, e.g., Cook at col. 2, lines 21-32 (reference numbers omitted and italics added).

Cook further teaches that “the spurious components [] may make it *difficult* if not *impossible* to properly receive the desired signal component []. Accordingly, because the receiver [] utilized a wide-band, band-select filter [] prior to amplification and frequency translation by non-linear components (i.e., by the LNA [] and the mixer [], respectively), the receiver [] suffers from potentially degraded performance. The potential for signal interference as described above limits the receiver []’s applicability”. Cook at col. 3, lines 19-25 (reference numbers omitted and italics added).

The teachings of Cook conclude: “Thus, the conventional receiver [] suffers from potentially degraded performance because only band select or wideband filtering is performed prior to the frequency translation operation [] or other operations (such as the amplification operation []) that involve components having a limited linear range (such as the mixer [] and the LNA []).” See, e.g., Cook at col. 10, line 65 to col. 11, line 4 (reference numbers omitted).

Accordingly, Cook specifically and particularly teaches away from the configuration of the receiving means of FIGS. 9 and 10 of Dacus on which the Examiner heavily relies in the Office Action in making his *prima facie* case of obviousness.

Since the teachings of Cook specifically and particularly teach away from the teachings of FIGS. 9 and 10 of Dacus, it is respectfully submitted that Cook and Dacus were improperly combined.

It is therefore respectfully submitted that a rejection under 35 U.S.C. § 103(a) based on the improper combination of Cook and Dacus cannot be maintained.

For at least the above reasons, it is respectfully requested that the obviousness rejection under 35 U.S.C. § 103(a) based on the improper combination of Cook and Dacus be withdrawn with respect to claims 1-15, 23-32, 39-62 and 76-93.

Track and Hold Circuit as **Part of a Mixer**

Claim 1 recites, in part, *a mixer comprising* a track and hold circuit and a bandpass circuit.

In other words, claim 1 states that (1) the track and hold circuit and (2) the bandpass circuit **are part of** *a mixer*.

Although alleged by the Examiner as part of his *prima facie* case of obviousness, Dacus does not teach *a mixer comprising* a track and hold circuit and a bandpass circuit.

In the Office Action, the Examiner alleges, without support, that “Dacus et al discloses a mixer (figs. 2-3; figs.9-10), comprising: a track and hold circuit (66 of fig. 2)” Office Action at page 2.

This is incorrect.

Dacus does not teach anywhere that active loop filter/sample and hold 66 of FIG. 2 of Dacus **is part of** *first mixer* 310 or *second mixer* 316 of FIGS. 9 and 10. FIGS. 9 and 10 relate to receiving means 300. FIG. 2 relates to transmitting means 50.

FIG. 2 is **NOT** a detailed version of first mixer 310 or second mixer 316 of FIGS. 9 and 10.

There is no basis in Dacus for even alleging that active loop filter/sample and hold 66 of FIG. 2 is **part of a mixer** and, in particular, *first mixer* 310 or *second mixer* 316 of FIGS. 9 and 10.

Applicants respectfully request that the Examiner carefully review and analyze Dacus. The Examiner is advised not to merely try to locate a mixer or a track and hold circuit in Dacus.

According to claim 1, the track and hold circuit is **part of** the mixer.

According to claim 1, the bandpass circuit is **part of** the mixer.

Applicants respectfully submit that there is no such teaching in Dacus. Accordingly, Applicants respectfully submit that the Examiner has not met his burden of going forward with presenting a *prima facie* case of obviousness.

M.P.E.P. § 2142 states that “[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.” M.P.E.P. § 2142 at page 2100-125 (Rev. 5, Aug. 2006)(italics in the original).

For at least the above reasons, it is respectfully requested that the rejection be withdrawn with respect to independent claim 1 and its rejected dependent claims (i.e., claims 2-15 and 23-32).

Claims 1-15 and 23-32 are in condition for allowance.

Claims 39-62 and 76-93

Claim 39 recites, in part, a mixer comprising a track and hold circuit and a bandpass circuit.

Claim 61 recites, in part, a differential mixer comprising a track and hold circuit and a bandpass circuit.

Claim 76 recites, in part, a mixer comprising track and hold means and limiting means.

Applicants have already indicated above that Dacus, despite allegations by the Examiner in presenting his *prima facie* case of obviousness, does not teach a mixer or differential mixer comprising a track and hold circuit or track and hold means.

Despite the unsupported allegations in the Office Action by the Examiner, Dacus does not teach a track and hold circuit or track and hold means **as part of a mixer or differential mixer**.

Applicants respectfully submit that there is no such teaching in Dacus. Accordingly, Applicants respectfully submit that the Examiner has not met his burden of going forward with presenting a *prima facie* case of obviousness.

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For at least the above reasons, it is respectfully requested that the rejection be withdrawn with respect to independent claims 39, 61 and 76 and their dependent claims (i.e., claims 40-60, 62, and 77-93).

Claims 39-62 and 76-93 are in condition for allowance.

Conclusion

Applicants do not necessarily agree or disagree with the Examiner’s characterization of the documents made of record, either alone or in combination, or the Examiner’s characterization of recited claim elements. Furthermore, Applicants respectfully reserve the right to argue the characterization of the documents of record, either alone or in combination, to argue what is allegedly well known, allegedly obvious or allegedly disclosed, or the characterization of the recited claim elements should that need arise in the future.

With respect to the present application, Applicants hereby rescind any disclaimer of claim scope made in the parent application or any predecessor or related application. The Examiner is advised that any previous disclaimer of claim scope, if any, and the alleged prior art

that it was made to allegedly avoid, may need to be revisited. Nor should a disclaimer of claim scope, if any, in the present application be read back into any predecessor or related application.

In view of at least the foregoing, it is respectfully submitted that the pending claims 1-93 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

The Commissioner is hereby authorized to charge any additional fees, to charge any fee deficiencies or to credit any overpayments to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

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Respectfully submitted,

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